

CLAIMS:

1. A metal halide lamp comprising a discharge vessel surrounded by an outer envelope with clearance and having a ceramic wall which encloses a discharge space filled with a filling comprising an inert gas, such as xenon (Xe), and an ionizable salt, wherein in said discharge space two electrodes are arranged whose tips have a mutual interspacing so as 5 to define a discharge path between them, characterized in that said ionizable salt comprises NaI, TII, CaI₂ and X-iodide, wherein X is one or more elements selected from the group comprising rare earth metals.
2. Lamp according to claim 1, wherein X is one or more elements selected from 10 the group comprising Sc, Y, La, Ce, Pr, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Nd.
3. Lamp according to claim 1 or 2, wherein X is one or more elements selected from the group comprising Ce, Pr, Nd.
- 15 4. Lamp according to claim 1, 2 or 3, wherein the molar percentage ratio X-iodide/(NaI + TII + CaI₂ + X-iodide) lies between 0 and 10%, in particular between 0,5 and 7%, more in particular between 1 and 6%.
5. Lamp according to claim 1, 2, 3 or 4, wherein the molar percentage ratio 20 CaI₂/(NaI + TII + CaI₂ + X-iodide) lies between 10 and 95%.
6. Lamp according to any of the preceding claims 1 through 5, wherein the amount of NaI, TII, CaI₂ and X-iodide lies between 0,001 and 0,5 g/cm³, in particular between 0,025 and 0,3 g/cm³.
- 25 7. Lamp according to any of the preceding claims 1 through 6, emitting light during stable nominal operation having a color temperature T_c above 3500K, wherein the filling of the discharge space also comprises a halide selected from Mn and In.

8. Lamp according to any of the preceding claims 1 through 7, wherein the filling comprises Hg.

9 Lamp according to any of the preceding claims 1 through 8, wherein the lamp
5 has wall load when in stable operation at rated power of at least 30 W/cm².

10 Lamp according to any of the preceding claims 1 through 9, wherein at least
one electrode extends inside the discharge vessel over a length forming a tip to bottom
distance (t-b) between the discharge vessel wall and the electrode tip and which the tip to
10 bottom distance (t-b) is at most 4.5mm.

11 Lamp according to any of the preceding claims 1 through 10, wherein the
discharge vessel has a rectangular cross section along the discharge path and wherein the tip
to bottom distance (t-b) is at most 3.5mm.

15 12 Lamp according to any of the preceding claims 1 through 9, wherein the filling
of the discharge vessel is free of Cs.

13. Metal halide lamp to be used in a vehicle headlamp according to any of the
20 preceding claims 1 through 6.

14. Method for manufacturing a vehicle headlamp according to any of the
preceding claims 1 through 6, wherein the vehicle headlamp is provided with a metal halide
lamp comprising a discharge vessel surrounded by an outer envelope with clearance and
25 having a ceramic wall which encloses a discharge space filled with a filling comprising an
inert gas, such as xenon (Xe), and an ionizable salt, wherein in said discharge space two
electrodes are arranged whose tips have a mutual interspacing so as to define a discharge path
between them, characterized in that said ionizable salt comprises NaI, TlI, CaI₂ and X-iodide,
wherein X is selected from the group comprising rare earth metals.